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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/492,044	01/26/2000	Gentaro Okayasu	450100-02278	9377

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EXAMINER	
HWANG, JOON H	

ART UNIT	PAPER NUMBER
2166	

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/492,044	OKAYASU ET AL.	
	Examiner	Art Unit	
	Joon H. Hwang	2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-5 and 7-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-5 and 7-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The applicants amended claims 1, 5, 7, and 9 in the amendment received on 6/26/06.

The claims 1, 3-5, and 7-10 are pending.

Response to Arguments

2. Applicant's arguments filed in the amendment received on 6/26/06 have been fully considered but they are not persuasive.

In response to applicant's arguments, the recitation "generating a stream with a unique identifier when a recording area is successfully secured" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

"Prima facie case of obviousness is established when **teachings of prior art appear to suggest claimed subject matter to person of ordinary skill in art**; it is incumbent upon applicant to go forward with objective evidence of unobviousness once prima facie case is established." In re Rinehart (CCPA) 189 USPQ 143 Decided Mar. 11, 1976 No. 75-608 U.S. Court of Customs and Patent Appeals.

Claim Rejections - 35 USC § 101

3. Claims 1, 3-5, and 7-10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

MPEP 2106 (II)(A) states:

> The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (*Brenner v. Manson*, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); *In re Ziegler*, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)). Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful.
>
> Apart from the utility requirement of 35 U.S.C. **101**, usefulness under the patent eligibility standard requires significant functionality to be present to satisfy the useful result aspect of the practical application requirement. See *Arrhythmia*, 958 F.2d at 1057, 22 USPQ2d at 1036. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make the invention eligible for patenting. For example, a claim directed to a word processing file stored on a disk may satisfy the utility requirement of 35 U.S.C. **101** since the information stored may have some "real world" value. However, the mere fact that the claim may satisfy the utility requirement of 35 U.S.C. **101** does not mean that a useful result is achieved under the practical application requirement. The claimed invention as a whole must produce a "useful, concrete and tangible" result to have a practical application.

Claim 1 recites "A free storage space management apparatus in a broadcasting apparatus for generating a stream with a unique identifier when a recording area is

successfully secured" in lines 1-3. However, claim 1 does not produce a "useful, concrete and tangible" result for the apparatus for generating a stream with a unique identifier when a recording area is successfully secured. Thus, claim 1 is non-statutory. Claims 3-4 are likewise rejected. The same rationale applies to claim 5. Furthermore, the claim 5 also appears to have no claimed result under the determining condition. Thus, claim 5 is non-statutory. Claims 7-10 are likewise rejected.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1, 3-5, and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fijita et al. (U.S. Patent No. 5,841,740) in view of Uchinuma (U.S. Patent No. 5,440,737), and further in view of Blumenau et al. (U.S. Patent No. 6,574,667).

With respect to claim 1, Fijita teaches a free storage space management in a broadcasting apparatus for generating a stream with a unique identifier when a recording area is successfully secured (i.e., updating free space information in audio/video data recording/reproducing apparatus, lines 50-58 in col. 9 and fig. 1, and secures recording regions for recording, generates record entry, and generates a file handle, line 40 in col. 13 thru line 24 in col. 14). Fijita teaches recording means for recording information which includes information relating to free storage space of the

recording means (i.e., a hard disc array device for recording that includes free space information, fig. 1, fig. 3, fig. 4, fig. 7, lines 35-58 in col. 5, lines 20-42 in col. 6, lines 10-37 in col. 7, lines 13-65 in col. 8, lines 50-58 in col. 9, and lines 53-56 in col. 10). Fijita teaches control means for recording information in the recording means and for acquiring the information relating to the free storage space of the recording means (i.e., a control system records information in the hard disc array device and generates free space information of the hard disc array device, fig. 1, fig. 2, lines 28-45 in col. 7, lines 50-58 in col. 9, lines 12-16 in col. 10, lines 14-21 in col. 12, line 40 in col. 13 thru line 23 in col. 14, and lines 60-63 in col. 20). Fijita does not explicitly disclose generating a list in which the recording means are arranged in decreasing order of free storage space. However, Uchinuma teaches generating a list in which the recording means are arranged in decreasing order of free storage space and the control means selects the recording means (i.e., allocating volumes in decreasing order of free space available and a file-allocation control selects a suitable volume, line 41 in col. 5 thru line 53 in col. 6 and fig. 3) in order to provide the highest data processing efficiency. Uchinuma further teaches comparing the storage space consumption amount to the free storage space values of all the recording means (i.e., checking whether there is enough free space on all the volumes, line 41 in col. 5 thru line 37 in col. 6). Therefore, based on Fijita in view of Uchinuma, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teaching of Uchinuma to the system of Fijita in order to provide the highest data processing efficiency. Fijita teaches an interface to a recording system in fig. 2. Fijita and Uchinuma do not explicitly disclose

determining whether there exists a recording means having an unused port. However, Blumenau teaches determining whether there exists a recording means having an unused port (i.e., checking a non-busy storage port to a storage, wherein the storage coupled to a plurality of storage ports, line 48 in col. 5 thru line 5 in col. 6, lines 25-39 in col. 6, lines 20-55 in col. 8, and lines 17-28 in col. 9) in order to provide immediate access to the storage. Therefore, based on Fijita in view of Uchinuma, and further in view of Blumenau, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teaching of Blumenau to the system of Fijita in order to provide immediate access to the storage.

With respect to claim 3, Fijita teaches when a discrepancy occurs between the information relating to the free storage space of the recording means and management information relating to free storage space in the control means, the control means synchronizes the management information relating to free storage space in the control means with the information relating to the free storage space of the recording means (i.e., generating free space information in a volatile memory (RAM) of a control system, wherein the generation is based on information from other apparatuses, such as the hard disc array device, than the RAM of the control system, and updated free space information is maintained on both the control system and the hard disc array device, fig. 1, fig. 2, lines 10-45 in col. 7, lines 50-58 in col. 9, lines 12-16 in col. 10, lines 14-21 in col. 12, line 40 in col. 13 thru line 23 in col. 14, and lines 60-63 in col. 20).

With respect to claim 4, Fijita teaches the recording means includes a plurality of recording means and an operation of securing a recording area in one of the plurality of

recording means in response to a command from the control means (i.e., a plurality of hard disc devices, lines 55-65 in col. 8, lines 54-56 in col. 13, and lines 39-48 in col. 20). Fijita does not explicitly disclose securing a recording area in another of the plurality of recording means in accordance with a reason for a failure of the securing. However, Uchinuma teaches securing a recording area in another of the plurality of recording means in accordance with a reason for a failure of the securing (i.e., locating a recording area in another of the plurality of storage volumes based on a failure of locating one, line 41 in col. 5 thru line 37 in col. 6 and fig. 3). Therefore, the limitations of claim 4 are rejected in the analysis of claims 1 and 3 above, and the claim is rejected on that basis.

The limitations of claim 5 are rejected in the analysis of claim 1 above, and the claim is rejected on that basis.

The limitations of claim 7 are rejected in the analysis of claim 3 above, and the claim is rejected on that basis.

The limitations of claim 8 are rejected in the analysis of claim 4 above, and the claim is rejected on that basis.

6. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fijita et al. (U.S. Patent No. 5,841,740) in view of Uchinuma (U.S. Patent No. 5,440,737) and Blumenau et al. (U.S. Patent No. 6,574,667), and further in view of Schmuck et al. (U.S. Patent No. 6,032,216).

With respect to claim 9, Fijita, Uchinuma, and Blumenau disclose the claimed subject matter as discussed above except temporarily securing a recording area in the second information relating to free storage space but does not change a value of the information relating to the free storage space of the recording means. However, Schmuck teaches temporarily securing a recording area in the second information relating to free storage space but does not change a value of the information relating to the free storage space of the recording means (i.e., obtaining a token for temporarily securing free spaces in a region and updating a status of an allocation table as "in use" for the free spaces in the region; thus, a value of the information relating to the free space in not changed, line 37 in col. 17 thru line 24 in col. 18, lines 20-29 in col. 14, and lines 19-54 in col. 15) in order to reduce interferences among multiple processors simultaneously allocating storage spaces. Therefore, based on Fijita in view of Uchinuma and Blumenau, and further in view of Schmuck, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teaching of Schmuck to the system of Fijita in order to reduce interferences among the multiple processors simultaneously allocating storage spaces.

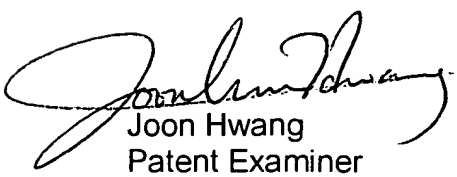
With respect to claim 10, the limitations of claim 10 are similar to the limitations of claim 7 above. Fijita, Uchinuma, and Blumenau do not explicitly disclose synchronizing the second information relating to free storage space with the information relating to the free storage space of the recording means. However, Schmuck teaches maintaining same status information for free spaces in a region on both the allocation table and disk when there is a change, such as consuming disk block, in the disk (lines 20-29 in col.

14, lines 7-54 in col. 15, and line 37 in col. 17 thru line 57 in col. 18) concerning synchronizing the second information relating to free storage space with the information relating to the free storage space of the recording means. Therefore, the limitations of claim 10 are rejected in the analysis of claims 7 and 9 above, and the claim is rejected on that basis.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joon H. Hwang whose telephone number is 571-272-4036. The examiner can normally be reached on 9:30-6:00(M~F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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10/27/06